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The changes in U.S. pork trade in the past 20 years are quite impressive. U.S. pork exports have grown from 86 million pounds carcass weight equivalent in 1986 to 2.66 billion pounds in 2005. Another comparison shows that the U.S. has gone from a negative 1.036 billion pounds net export in 1986 to a positive 1.636 billion pounds in 2005 (Table 1).

The value of pork and pork byproduct exports has grown from \$1.97 per hog slaughtered in 1986 to \$25.44 per head slaughtered in 2005 (Table 2).

These changes in trade have permitted the pork industry to grow at an additional rate of about 0.8% per year on average over the last 20 years. In other words, the U.S. pork industry was about 16 million head larger in 2005 than it would have been had pork imports and exports remained at 1986 levels.

Not only has the increase in the quantity of pork traded allowed the industry to grow without lowering prices, but it has also added to producers' incomes in the years when net exports grew. Our efforts to calculate the returns to producers by year from 1986 to 2005 are in Table 3. We believe these estimates are conservative because they show that producers' incomes increased only in the year when net exports grew. In other words, we assumed producers reacted to higher prices by increasing the U.S. herd enough to offset any price benefits from net export growth in the following years. Some observers do not believe producers could react this quickly or increase production enough to completely offset benefits in the following years.

Pork producers can take credit for much of this export growth. They have improved the quality of pork which has made it more competitive and funded promotion efforts. Efforts by the

U.S. government to liberalize trade, as well as improved per capita incomes in many countries were also important factors in increasing exports. Japan is the largest U.S. pork customer, purchasing nearly 40% of our exports in 2005. Mexico is second and Canada is third in tonnage purchased from the U.S. Table 4 shows our most important pork customers by their percentage share of U.S. pork exports purchased in 2005 based on carcass weight equivalent.

Three major groups in the U.S. have contributed to the promotion of pork exports. They are USDA, the U.S. meat packing industry, and hog producers. No studies have been made, that we are aware of, to determine the amount of credit each of these groups should receive for increasing the growth in pork exports. Pork producers alone have spent nearly \$55 million in the last 20 years to promote exports through Pork Checkoff funds.

We believe the total income of all U.S. pork producers has been improved by \$6.3 billion over the last 20 years by the increase in exports (Table 3). Less than 13% of this would be required to repay all of the \$775.5 million in Checkoff contributions by producers during this period.

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Table 1
U.S. Pork Imports and Exports
(million pounds)

| Year | Pork Imports | Pork Exports | Net Pork Exports |
|-------------|---------------------|---------------------|-------------------------|
| 1986 | 1122 | 86 | - 1036 |
| 1987 | 1195 | 109 | - 1086 |
| 1988 | 1137 | 195 | - 942 |
| 1989 | 896 | 268 | - 628 |
| 1990 | 898 | 243 | - 655 |
| 1991 | 775 | 290 | - 485 |
| 1992 | 646 | 420 | - 226 |
| 1993 | 740 | 446 | - 294 |
| 1994 | 744 | 549 | - 195 |
| 1995 | 664 | 787 | 123 |
| 1996 | 619 | 970 | 351 |
| 1997 | 634 | 1044 | 410 |
| 1998 | 705 | 1230 | 525 |
| 1999 | 827 | 1277 | 451 |
| 2000 | 967 | 1287 | 320 |
| 2001 | 951 | 1559 | 608 |
| 2002 | 1071 | 1612 | 541 |
| 2003 | 1185 | 1717 | 532 |
| 2004 | 1099 | 2181 | 1082 |
| 2005 | 1024 | 2660 | 1636 |

Table 2
Value of U.S. Pork and Byproduct Exports to the Pork Industry
per Head of Total U.S. Slaughter

| Year | Value of Pork | Value of Byproducts | Total |
|-------------|----------------------|----------------------------|--------------|
| 1986 | \$1.05 | \$0.92 | \$1.97 |
| 1987 | 1.59 | 1.10 | 2.69 |
| 1988 | 2.84 | 1.62 | 4.46 |
| 1989 | 3.72 | 1.35 | 5.07 |
| 1990 | 3.84 | 1.51 | 5.35 |
| 1991 | 3.79 | 1.71 | 5.50 |
| 1992 | 4.76 | 1.66 | 6.42 |
| 1993 | 5.20 | 1.61 | 6.81 |
| 1994 | 5.73 | 1.80 | 7.53 |
| 1995 | 8.79 | 1.83 | 10.62 |
| 1996 | 11.02 | 1.82 | 12.84 |
| 1997 | 11.36 | 2.46 | 13.82 |
| 1998 | 10.17 | 2.13 | 12.30 |
| 1999 | 10.86 | 1.83 | 12.69 |
| 2000 | 12.34 | 2.00 | 14.34 |
| 2001 | 14.17 | 2.23 | 16.40 |
| 2002 | 13.42 | 2.02 | 15.44 |
| 2003 | 13.80 | 2.38 | 16.18 |
| 2004 | 18.15 | 3.38 | 21.53 |
| 2005 | 22.01 | 3.43 | 25.44 |

Table 3
Returns to Producers from Decreased Imports
and Increased Exports of Pork

| Year | Checkoff funding \$ | Returns in mil. ² \$ | Net Import or Export ³ % | Return per cwt. \$ | Return per hog \$ |
|--------------|---------------------------|---------------------------------------|---|--------------------------|-------------------------|
| 2005 | 4,755,263 | 1,608.7 | 7.91 net exp. | 5.83 | 15.54 |
| 2004 | 4,365,761 | 1,654.2 | 5.27 net exp. | 6.05 | 15.99 |
| 2003 | 4,675,003 | - 46.3 | 2.67 net exp. | - 0.17 | - 0.46 |
| 2002 | 4,842,222 | - 199.9 | 2.75 net exp. | - 0.76 | - 1.99 |
| 2001 | 5,159,989 | 810.7 | 3.18 net exp. | 3.18 | 8.28 |
| 2000 | 5,245,321 | - 377.7 | 1.69 net exp. | - 1.49 | - 3.86 |
| 1999 | 4,896,000 | - 129.2 | 2.33 net exp. | - 0.49 | - 1.27 |
| 1998 | 5,700,000 | 114.7 | 2.76 net exp. | 0.45 | 1.14 |
| 1997 | 4,800,000 | 136.0 | 2.37 net exp. | 0.58 | 1.48 |
| 1996 | 2,498,000 | 363.4 | 2.05 net exp. | 2.45 | 6.10 |
| 1995 | 1,754,000 | 597.4 | 0.69 net exp. | 2.49 | 6.20 |
| 1994 | 1,267,800 | 200.3 | 1.11 net imp. | 0.84 | 2.09 |
| 1993 | 1,150,000 | - 149.9 | 1.73 net imp. | - 0.65 | - 1.61 |
| 1992 | 1,079,000 | 545.9 | 1.31 net imp. | 2.35 | 5.75 |
| 1991 | 996,268 | 419.5 | 3.04 net imp. | 1.94 | 4.76 |
| 1990 | 651,595 | - 67.9 | 4.28 net imp. | - 0.33 | - 0.80 |
| 1989 | 466,024 | 368.1 | 3.98 net imp. | 1.72 | 4.15 |
| 1988 | 280,577 | 277.5 | 6.03 net imp. | 1.31 | 3.16 |
| 1987 | 125,834 | | 7.59 net imp. | | |
| Total | 54,657,668 | 6,325.5 | | avg. 1.40 | avg. 3.59 |

¹ Used -0.5 elasticity 1988-1990
Used -0.3 elasticity 1991-1999
Used -0.2 elasticity 2000-2005

² Net import or export as percent of U.S. production.

Table 4
U.S. Pork Exports by Country in 2005
Percent Share of Tonnage

| Country | % of U.S. Exports |
|------------------|--------------------------|
| Japan | 39.3 |
| Mexico | 20.2 |
| Canada | 11.3 |
| South Korea | 7.1 |
| China (mainland) | 4.6 |
| Russia | 3.5 |
| China (Taiwan) | 2.4 |
| Caribbean | 1.5 |
| Hong Kong | 0.9 |
| Other | 9.2 |